

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of producing a soft magnetic material, comprising the steps of:

preparing soft magnetic powder containing a plurality of soft magnetic particles by using an atomization method;

etching said soft magnetic powder to remove surfaces of said soft;
magnetic particles; and

after said etching step, performing a first heat treatment of said soft magnetic powder in a finely divided state at a temperature of not less than 400 °C and not more than 900 °C,

wherein said etching step includes the step of removing surfaces of said soft magnetic particles such that an average particle diameter of the soft magnetic powder prepared by said preparing step is reduced to a value in a range of not less than 90% relative to the average particle diameter.

2. (Original) The method of producing the soft magnetic material according to claim 1, wherein, after said etching step, said soft magnetic powder has a particle size distribution substantially existing only in a range of not less than 10 μm and not more than 400 μm.

3. (Cancelled)

4. (Original) The soft magnetic powder produced using the method of producing the soft magnetic material according to claim 1, wherein

said soft magnetic powder has a coercivity which is reduced to a value of not more than 70% relative to the coercivity of the soft magnetic powder prepared by said preparing step.

5. (Currently Amended) The method of producing the soft magnetic material according to claim 1, further comprising the steps of:

after said step of performing the first heat treatment, forming an insulating film on each of said plurality of soft magnetic particles; and

preparing a compact by pressure-forming said plurality of soft magnetic particles each having said insulating film formed thereon.

6. (Previously Presented) The method of producing the soft magnetic material according to claim 5, further comprising the step of adding organic matter to said soft magnetic powder before said step of preparing the compact.

7. (Currently Amended) The method of producing the soft magnetic material according to claim 5, further comprising the step of performing a ~~second~~ heat treatment of said compact at a temperature of not less than 30 °C and less than a thermal decomposition temperature of said insulating film.

8. (Original) A dust core produced using the method of producing the soft magnetic material according to claim 7, wherein said dust core has a coercivity of not more than 1.0×10^2 A/m.